

REMARKS

Applicants have studied the Final Office Action dated November 14, 2007. Independent Claims 1, 21, and 37 have been amended. Claim 39 has been cancelled. Claims 1-38 and 40-42 are pending. Reconsideration and allowance of the pending claims in view of the above amendments and the following remarks are respectfully requested.

In the Office Action, the Examiner:

- (3-4) rejected claims 1-8, 10-12, 15, 17, 20-27, 37-38, and 40-42 under 35 U.S.C. § 102(b) as being anticipated by Niemeier et al. (US, 5,574,482);
- (5-6) rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Niemeier et al. (US, 5,574,482) in view of Zhai et al. ("Performance Optimization of Virtual Keyboards");
- (7) rejected claims 13-14 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Niemeier et al. (US, 5,574,482) in view of Zhai et al. ("Shorthand Writing Stylus Keyboard");
- (8) rejected claims 16 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Niemeier et al. (US, 5,574,482) in view of Carman, II (US 5,454,046);
- (9) rejected claim 19 under 35 U.S.C. § 103(a) as being unpatentable over Niemeier et al. (US, 5,574,482) in view of Zhai et al. ("Shorthand Writing Stylus Keyboard"), further in view of Carman, II (US 5,454,046); and
- (10) rejected claims 29-36 under 35 U.S.C. § 103(a) as being unpatentable over Niemeier et al. (US, 5,574,482) in view of Milewski et al. ("Medical Word Recognition Using a Computational Semantic Lexicon").

(3-4) Rejection under 35 U.S.C. §102(b) Niemeier

As noted above, the Examiner rejected claims rejected claims 1-8, 10-12, 15, 17, 20-27, 37-38, and 40-42 under 35 U.S.C. § 102(b) as being anticipated by Niemeier (US, 5,574,482). Independent claims 1, 21 and 37 have been amended to distinguish over

Niemeier. Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. The present invention is directed to word pattern recognition of gestures entered on touch-screen devices such as mobile phone, handhelds, and tablet computers and other devices with keyboards. The system supports very large vocabularies for each specific user. This technology has been licensed by IBM to a new Silicon Valley company, Shape Writer Inc.. A demonstration of this technology is available at online URL (<http://www.shapewriter.com/demo.html>). As shown in FIGs. 2 through 8, the system recognizes words through defined word patterns of known paths. Each of the paths connect elements of the word on the keyboard. Unlike prior art systems such as Niemeier that rely on the use of "temporary keys" or the similarly as disclosed by Dasher (See Background of the present invention as published at paragraph [0013] emphasis added), reproduced below:

Dasher, another approach using continuous gesture input, dynamically arranges letters in multiple columns. Based on preceding context, likely target letters appear closer to the user's cursor location. A letter is selected when it passes through the cursor; consequently, cursor movement is minimized. This minimization, however, is at the expense of visual attention. Because the letter arrangement constantly changes, Dasher demands user's visual attention to dynamically react to the changing layout. Reference is made to D. J. Ward, A. F. Blackwell, and D. J. C. MacKay. "Dasher-a data entry interface using continuous gestures and language models", Proc. UIST. 2000, pages 129-137

In contrast in the present invention, "the virtual keyboard contains a set of characters forming elements in the word without temporary target letters being placed adjacent to a current stroke location." The present invention captures strokes on a virtual keyboard. Next the system recognizes a word pattern by selectively processing different aspect of the stroke using a combination of channels (shape, location, tunnel) in relation to paths on the keyboard. Examples are clearly shown in FIGS. 7A through 7I.

Amended independent claims 1 (method with multiple processing channels), 21 (system with multiple processing channels, and 37 (method with at least one location processing channel) recite, *inter alia*:

1. (Currently Amended) A method of recognizing words, comprising:

defining word patterns of a plurality of known words by a plurality of paths, wherein each path connects elements in a word on a virtual keyboard, wherein the virtual keyboard contains a set of characters forming elements in the word without temporary target letters being placed adjacent to a current stroke location;

accepting a stroke as an input on the virtual keyboard layout; and

recognizing a word pattern by processing the stroke using a combination of a plurality of channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard.

21. (Currently Amended) A shorthand symbol system for recognizing words, comprising:

a graphical keyboard layer for accepting a stroke as an input trace, wherein the virtual keyboard contains a set of characters forming elements in the word without temporary target letters being placed adjacent to a current stroke location;;

a storage for storing word patterns of a plurality of paths, wherein each path connects a set of letters received from the graphical keyboard layer; and

a pattern recognition engine that recognizes a word pattern by processing the stroke using a combination of a plurality of channels that selectively process different aspects of the input trace in relation to the plurality of the paths on the graphical keyboard layer.

37. (Currently Amended) A method of recognizing words, the method comprising:

defining word patterns of a plurality of known words by a plurality of paths, wherein each path connects elements in a word on a virtual keyboard, wherein the virtual keyboard contains a set of characters forming elements in the word without temporary target letters being placed adjacent to a current stroke location;
accepting a stroke as an input on the virtual keyboard layout; and
recognizing a word pattern by processing the stroke using at least one location channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard.

Support for this amendment is found in the application as originally filed, where word patterns are recognized independent of gesture scale and location. See Abstract, paragraph [0013], [0019] and FIG 8D discussing adjacent duplicate characters as well as non-alphabetical characters and un-used characters in a raw string 873 and paragraphs [0099] through [0110]. No new matter has been added.

Niemeier, which follows the teachings of Montgomery US 4211497, teaches that a pen trace connecting letters in a word on a "normal" keyboard would inevitably cross other letters that are not in the word, so a pen trace on a keyboard method would not work. To overcome this, Niemeier teaches a dynamic keyboard, so that as the user draws a stroke, likely letters to follow will be "temporarily" placed next to the current pen position. This solution requires the user to react to a constantly changing dynamic keyboard. There are more recent and more systematic methods that follow that line of thinking, most notably Dasher (<http://www.inference.phy.cam.ac.uk/dasher/>). Independent claims 1, 21 and 37 have been amended to distinguish over Niemeier.

The Examiner on page 2, paragraph 4, points to Niemeier at Fig 32, col. 7, line 41-53 which is reproduced here for convenience (emphasis added):

"FIG. 32 shows an example of the input of the word "that" after selecting the letter t on an on-screen touch-sensitive keyboard using the method. When t is

touched with the input device, the temporarily available keys 70 that appear for use include the letters h and a. Without lifting the input device 50 from the screen, the user slides the device 50 from t into h, then into a, and then back into t. The user can then continue to slide to the background area of the keyboard 80 outside of the letter t, and lift the device 50 which will result in a space. The lines connecting the letters in this particular figure show the path of the input device to input the word "that".

It is important to note that on a normal QWERTY keyboard H and A are not next to the key T, hence the need for temporarily available keys 70. In contrast, the present invention is very different. Instead of changing the layout dynamically to meet the need for connecting letters in a word to be entered, the present invention uses pattern recognition based on a large lexicon by "recognizing a word pattern by processing the stroke using a combination of a plurality of channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard."

In the present invention the user is able to cross irrelevant letter keys and still enter the intended word. The present invention works with a large vocabulary while keeping the virtual keyboard layout stable -- stable in the sense the keys and layout do not change unless the user initiates it by pressing a SHIFT key for example. There will be no "temporary available keys 70" added to the keyboard while the user draws the gesture i.e. "wherein the virtual keyboard contains a set of characters forming elements in the word without temporary target letters being placed adjacent to a current stroke location."

The "stroke" of the present invention is not substantially straight line as taught by Niemeier. The straight lines in Niemeier are possible because all letters, including the "temporary available keys 70", in a word need to be next to each other in order to connect. Our "recognizing" is through computing likelihood of various candidate words based on recognition scores while Niemeier 's in claim 1 c, teaching responding is based on individual letter keys "touched".

On page 4 of the Office Action, the Examiner states "Regarding claim 11 [...] "It is readily apparent and inherent that the Niemeier's invention has to use template matching for each alphabets to recognize the word such as "that". The Applicants respectfully disagree. Niemeier is not only teaching but also claiming "touching" a key, including "temporary available keys 70". Niemeier is completely silent on a template because in fact there was no need to template match letters because Niemeier only keys that are "touched" are selected. Accordingly, independent claims 1, 21 and 37 have been amended to distinguish over Niemeier for this reason.

The Examiner cites 35 U.S.C. § 102(e) and a proper rejection requires that a single reference teach (i.e., identically describe) each and every element of the rejected claims as being anticipated by Niemeier.¹ The elements in independent claims 1, 21, and 37 of "wherein the virtual keyboard contains a set of characters forming elements in the word without temporary target letters being placed adjacent to a current stroke location" and "recognizing a word pattern by processing the stroke using a at least one location channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard" is not taught or disclosed by Niemeier. The apparatus of Niemeier does not analyze a gesture or by a user on a virtual keyboard to recognize defined: "word patterns of a plurality of known words by a plurality of paths, wherein each path connects elements in a word on a virtual keyboard" because Niemeier explicitly teaches each key being touched, "temporary available keys 70" in a substantially straight line. Accordingly, the present invention distinguishes over Niemeier for at least this reason. The Applicants respectfully submitted that the Examiner's rejection under 35 U.S.C. § 102(e) has been overcome.

¹ See MPEP §2131 (Emphasis Added) "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim."

Independent claims 1, 21, and 37 have been amended to distinguish over Niemeier. Claims 2-8, 10-12, 15, 17, 22-27, 38 and 40-42 depend from independent claims 1, 21, and 37 respectively. Since dependent claims contain all the limitations of the independent claims, claims 2-8, 10-12, 15, 17, 22-27, 38 and 40-42 distinguish over Niemeier, as well.

(5-6) Rejection under 35 U.S.C. §103(a) Niemeier in view of Zhai

As noted above, the Examiner rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Niemeier (US, 5,574,482) in view of Zhai et al. ("Performance Optimization of Virtual Keyboards"). It is important to point out the author of the paper Shumin Zhai, is a co-inventor on the present application and both the present invention and the inventive concepts in the paper were at the time of the each respective invention and are currently still commonly owned by the assignee, International Business Machines.

Independent claims 1, 21, and 37 as described above in the section entitled "(3-4) Rejection under 35 U.S.C. §102(e) Niemeier" have been amended to distinguish over Niemeier.

Further Niemeier reference taken alone and/or in view of Zhai simply does not suggest, teach or disclose the patentably distinct limitation of the elements in independent claim 1 of "wherein the virtual keyboard contains a set of characters forming elements in the word without temporary target letters being placed adjacent to a current stroke location" and "recognizing a word pattern by processing the stroke using a at least one location channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard." is not taught or disclosed by Niemeier and/or in view of Zhai. The apparatus of Niemeier does not analyze a gesture or by a user on a virtual keyboard to recognize defined: "word patterns of a plurality of known words by a plurality of paths, wherein each path connects elements in a word on a

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virtual keyboard" because Niemeier explicitly teaches each key being touched, "temporary available keys 70" in a substantially straight line.

Moreover, the Federal Circuit has consistently held that when a §103 rejection is based upon a modification of a reference that destroys the intent, purpose or function of the invention disclosed in the reference, such a proposed modification is not proper and the *prima facie* case of obviousness can not be properly made. See *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Here the intent, purpose and function of Niemeier taken alone an/or in view of Zhai is the use of individual being touched, in contrast the intent and purpose of the present invention is "recognizing a word pattern by processing the stroke using a combination of a plurality of channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard." Not only does the present invention eliminate the need for "temporary available keys 70", the system recognizes a word pattern by selectively processing different aspect of the stroke using a combination of channels (shape, location, tunnel) in relation to paths on the keyboard. This combination, as suggested by the Examiner, destroys the intent and purpose of Niemeier taken alone and/or in view of Zhai keyboard entry and character recognizion. Accordingly, the present invention is distinguishable over Niemeier taken alone and/or in view of Zhai for this reason as well.

For the foregoing reasons, independent claim 1 as amended distinguishes over Niemeier taken alone and/or in view of Zhai. Claim 9 depends from claim 1. Since dependent claims contain all the limitations of the independent claims, claim 9 distinguishes over Niemeier taken alone and/or in view of Zhai, as well, and the Examiner's rejection should be withdrawn.

(7) Rejection under 35 U.S.C. §103(a) Niemeier in view of Zhai

As noted above, the Examiner rejected claims 13-14 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Niemeier (US, 5,574,482) in view of Zhai et al. ("Shorthand

Writing Stylus Keyboard"). It is important to point out that the author of the paper, Shumin Zhai, is a co-inventor on the present application and both the present invention and the inventive concepts in the paper were at the time of the each respective invention and are currently still commonly owned by the assignee International Business Machines.

Independent claims 1, 21, and 37 as described above in the section entitled "(3-4) Rejection under 35 U.S.C. §102(e) Niemeier" have been amended to distinguish over Niemeier.

Further, the Niemeier reference taken alone and/or in view of Zhai simply does not suggest, teach or disclose the patentably distinct limitation of the elements in independent claim 1 of "wherein the virtual keyboard contains a set of characters forming elements in the word without temporary target letters being placed adjacent to a current stroke location" and "recognizing a word pattern by processing the stroke using a at least one location channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard." is not taught or disclosed by Niemeier and/or in view of Zhai. The apparatus of Niemeier does not analyze a gesture or by a user on a virtual keyboard to recognize defined: "word patterns of a plurality of known words by a plurality of paths, wherein each path connects elements in a word on a virtual keyboard." Niemeier explicitly teaches each key being touched, "temporary available keys 70" in a substantially straight line.

Moreover, the Federal Circuit has consistently held that when a §103 rejection is based upon a modification of a reference that destroys the intent, purpose or function of the invention disclosed in the reference, such a proposed modification is not proper and the *prima facie* case of obviousness can not be properly made. See *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Here the intent, purpose and function of Niemeier taken alone and/or in view of Zhai is the use of individual being touched, in contrast the intent and purpose of the present invention is "recognizing a word pattern

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by processing the stroke using a combination of a plurality of channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard. Not only does the present invention eliminate the need for "temporary available keys 70", the system recognizes a word pattern by selectively processing different aspect of the stroke using a combination of channels (shape, location, tunnel) in relation to paths on the keyboard. This combination, as suggested by the Examiner, destroys the intent and purpose of Niemeier taken alone and/or in view of Zhai keyboard entry and character recognizion. Accordingly, the present invention is distinguishable over Niemeier taken alone and/or in view of Zhai for this reason as well.

For the foregoing reasons, independent claim 1 as amended distinguishes over Niemeier taken alone and/or in view of Zhai. Claims 13-14 and 18 depend from claim 1. Since dependent claims contain all the limitations of the independent claims, claims 13-14 and 18 distinguish over Niemeier taken alone and/or in view of Zhai, as well, and the Examiner's rejection should be withdrawn.

(8) Rejection under 35 U.S.C. §103(a) Niemeier in view of Carman, II

As noted above, the Examiner rejected claims 16 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Niemeier (US, 5,574,482) in view of Carman, II (US 5,454,046);

Independent claims 1, 21, and 37 as described above in the section entitled "(3-4) Rejection under 35 U.S.C. §102(e) Niemeier" have been amended to distinguish over Niemeier.

Further Niemeier reference taken alone and/or in view of Carman, II simply does not suggest, teach or disclose the patentably distinct limitation of the elements in independent claim 1 of "wherein the virtual keyboard contains a set of characters forming elements in the word without temporary target letters being placed adjacent to a

current stroke location" and "recognizing a word pattern by processing the stroke using a at least one location channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard." is not taught or disclosed by Niemeier and/or in view of Carman, II. The apparatus of Niemeier does not analyze a gesture or by a user on a virtual keyboard to recognize defined: "word patterns of a plurality of known words by a plurality of paths, wherein each path connects elements in a word on a virtual keyboard" because Niemeier explicitly teaches each key being touched, "temporary available keys 70" in a substantially straight line.

Moreover, the Federal Circuit has consistently held that when a §103 rejection is based upon a modification of a reference that destroys the intent, purpose or function of the invention disclosed in the reference, such a proposed modification is not proper and the *prima facie* case of obviousness can not be properly made. See *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Here the intent, purpose and function of Niemeier taken alone an/or in view of Carman, II is the use of individual being touched, in contrast the intent and purpose of the present invention is "recognizing a word pattern by processing the stroke using a combination of a plurality of channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard." Not only does the present invention eliminate the need for "temporary available keys 70", the system recognizes a word pattern by selectively processing different aspect of the stroke using a combination of channels (shape, location, tunnel) in relation to paths on the keyboard. This combination, as suggested by the Examiner, destroys the intent and purpose of Niemeier taken alone and/or in view of Carman, II keyboard entry and character recognition. Accordingly, the present invention is distinguishable over Niemeier taken alone and/or in view of Carman, II for this reason as well.

For the foregoing reasons, independent claim 1 as amended distinguish over Niemeier taken alone and/or in view of Carman, II. Claims 16 and 18 depend from claim 1. Since dependent claims contain all the limitations of the independent claims, claims 16 and 18

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distinguish over Niemeier taken alone and/or in view of Carmen, II, as well, and the Examiner's rejection should be withdrawn.

(9) Rejection under 35 U.S.C. §103(a) Niemeier in view of Zhai and Carman, II

As noted above, the Examiner rejected claim 19 under 35 U.S.C. § 103(a) as being unpatentable over Niemeier (US, 5,574,482) in view of Zhai et al. ("Shorthand Writing Stylus Keyboard"), further in view of in view of Carman, II (US 5,454,046). It is important to point out the author of the paper, Shumin Zhai, is a co-inventor on the present application and both the present invention and the inventive concepts in the paper were at the time of the each respective invention and are currently still commonly owned by the assignee International Business Machines.

Independent claims 1, 21, and 37 as described above in the section entitled "(3-4) Rejection under 35 U.S.C. §102(e) Niemeier" have been amended to distinguish over Niemeier.

Further, the Niemeier reference taken alone and/or and/or in view of Zhai and/or in view of Carman, II simply does not suggest, teach or disclose the patentably distinct limitation of the elements in independent claim 1 of "wherein the virtual keyboard contains a set of characters forming elements in the word without temporary target letters being placed adjacent to a current stroke location" and "recognizing a word pattern by processing the stroke using a at least one location channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard." is not taught or disclosed by Niemeier reference taken alone and/or and/or in view of Zhai and/or in view of Carman, II. The apparatus of Niemeier does not analyze a gesture or by a user on a virtual keyboard to recognize defined: "word patterns of a plurality of known words by a plurality of paths, wherein each path connects elements in a word on a virtual keyboard," Niemeier explicitly teaches each key being touched, "temporary available keys 70" in a substantially straight line.

Moreover, the Federal Circuit has consistently held that when a §103 rejection is based upon a modification of a reference that destroys the intent, purpose or function of the invention disclosed in the reference, such a proposed modification is not proper and the *prima facie* case of obviousness can not be properly made. See *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Here the intent, purpose and function of Niemeier reference taken alone and/or and/or in view of Zhai and/or in view of Carman, II is the use individual being touched, in contrast the intent and purpose of the present invention is "recognizing a word pattern by processing the stroke using a combination of a plurality of channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard." Not only does the present invention eliminate the need for "temporary available keys 70", the system recognizes a word pattern by selectively processing different aspect of the stroke using a combination of channels (shape, location, tunnel) in relation to paths on the keyboard. This combination, as suggested by the Examiner, destroys the intent and purpose of Niemeier reference taken alone and/or and/or in view of Zhai and/or in view of Carman, II keyboard entry and character recognition. Accordingly, the present invention is distinguishable over Niemeier reference taken alone and/or and/or in view of Zhai and/or in view of Carman, II for this reason as well.

For the foregoing reasons, independent claim 1 as amended distinguish over Niemeier taken alone and/or in view of Carman, II. Claim 19 depend from claim 1. Since dependent claims contain all the limitations of the independent claims, claim 19 distinguish over Niemeier taken alone and/or and/or in view Zhai in view of Carmen, II, as well, and the Examiner's rejection should be withdrawn.

(10) Rejection under 35 U.S.C. §103(a) Niemeier in view of Mileski

As noted above, the Examiner rejected claims 29-36 under 35 U.S.C. § 103(a) as being unpatentable over Niemeier et al. (US, 6,788,815) in view of Milewski et al. ("Medical

Word Recognition Using a Computational Semantic Lexicon"). Independent claims 1, 21 and 37 as described above in the section entitled "(3-4) Rejection under 35 U.S.C. §102(e) Niemeier" have been amended to distinguish over Niemeier.

Further, the Niemeier reference taken alone and/or and/or in view of Niemeier simply does not suggest, teach or disclose the patentably distinct limitation of the elements in independent claim 21 of "wherein the virtual keyboard contains a set of characters forming elements in the word without temporary target letters being placed adjacent to a current stroke location" and "recognizing a word pattern by processing the stroke using a at least one location channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard." is not taught or disclosed by Niemeier reference taken alone and/or and/or in view of Milewski. The apparatus of Niemeier does not analyze a gesture or by a user on a virtual keyboard to recognize defined: "word patterns of a plurality of known words by a plurality of paths, wherein each path connects elements in a word on a virtual keyboard." Niemeier explicitly teaches each key being touched, "temporary available keys 70" in a substantially straight line.

Moreover, the Federal Circuit has consistently held that when a §103 rejection is based upon a modification of a reference that destroys the intent, purpose or function of the invention disclosed in the reference, such a proposed modification is not proper and the *prima facie* case of obviousness can not be properly made. See *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Here the intent, purpose and function of Niemeier reference taken alone and/or and/or in view of Milewski is the use of individual being touched, in contrast the intent and purpose of the present invention is "recognizing a word pattern by processing the stroke using a combination of a plurality of channels that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard." Not only does the present invention eliminate the need for "temporary available keys 70", the system recognizes a word pattern by selectively processing different aspect of the stroke using a combination of

channels (shape, location, tunnel) in relation to paths on the keyboard. This combination, as suggested by the Examiner, destroys the intent and purpose of Niemeier reference taken alone and/or Milewski keyboard entry and character recognition. Accordingly, the present invention is distinguishable over Niemeier reference taken alone and/or in view of Milewski for this reason as well.

For the foregoing reasons, independent claim 21 as amended distinguishes over Niemeier taken alone and/or in view of Milewski. Claims 29-36 depend from claim 21. Since dependent claims contain all the limitations of the independent claims, claims 29-36 distinguish over Niemeier taken alone and/or in view of Milewski, as well, and the Examiner's rejection should be withdrawn.

CONCLUSION

The prior art made of record and not relied upon was reviewed and Applicants believe that such prior art is not pertinent to Applicants' disclosure.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicants have argued herein that such amendment was made to distinguish over a particular reference or combination of references.

Applicants acknowledge the continuing duty of candor and good faith to disclose information known to be material to the examination of this application. In accordance with 37 CFR §1.56, all such information is dutifully made of record. The foreseeable equivalents of any territory surrendered by amendment are limited to the territory taught by the information of record. No other territory afforded by the doctrine of equivalents is knowingly surrendered and everything else is unforeseeable at the time of this amendment by the Applicants and their attorneys.

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The Commissioner is hereby authorized to change any fees that may be required or credit any overpayment to Deposit Account 09-0441. In view of the preceding discussion, it is submitted that the claims are in condition for allowance. Reconsideration and re-examination is requested.

PLEASE CALL the undersigned if the Examiner believes that there are any informalities that can be corrected by Examiner's amendment, or that in any way it would help expedite the prosecution of the patent application.

Respectfully submitted.

Date: February 14, 2008

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